# RFDS 9.00 FIRE ALARM SYSTEMS

## 9.1; GENERAL:

This standard sets forth the requirements for the design, installation, testing, maintenance and monitoring of all fire alarm system installations in the City of Redmond, including those monitoring sprinkler systems. All such fire alarm systems shall conform to this Standard and the following documents:

- The Redmond Building Code (1997 Uniform Building Code as amended), and;
- The Redmond Fire Code (1997 Uniform Fire Code as amended), and;
- State of Washington Administrative Code 51-40 & 51-44, and;
- NFPA Standard 72, "National Fire Alarm Code", 1996 edition, and;
- Redmond Electrical Code (1996 National Electrical Code as amended), and;
- Nationally recognized standards as accepted by the Fire Marshal.

The most specific and/or restrictive provision shall apply if conflicts occur between the requirements found in these documents, as determined by the Redmond Fire Marshal.

Redmond Fire Department Standards shall constitute the primary reference document for the installation of automatic fire detection systems.

Required submittals, reviews, approvals, and inspections by the Redmond Fire Department are based upon City of Redmond adopted codes and ordinances, Redmond Fire Department Standards, and nationally recognized standards. Such submittal requirements, reviews, approvals, and inspections do not purport, however, to evaluate for compliance with the "Americans with Disabilities Act" (A.D.A.). Compliance with the A.D.A. is the sole responsibility of the owner/applicant.

All companies monitoring, installing, maintaining, or servicing fire alarm systems within the City of Redmond shall have a valid City of Redmond business license, and a valid Washington State Electrical Contractor's License. All installers shall hold a Washington State fire alarm installers card or a journeyman electricians card per RCW 19.28, sections 510, except for R-3 occupancies. An apprentice (training) certificate is acceptable for installers of fire alarm systems when supervised by a journeyman installer per RCW 19.28 sections 500-620.

Anyone doing acceptance tests, confidence tests, modification, repair, remodel, or addition to a new or existing system shall also have Seattle Certification appropriate to the alarm work being done.

### 9.1.1; AUTHORIZATION:

The Fire Chief is designated as the “authority having jurisdiction” by the adopted Redmond Fire Code, and the Community Development Guide section 20F 10.20. The Chief hereby authorizes the Fire Marshal to formulate Redmond Fire Department Standards as described in the Uniform Fire Code section 101.4 and to be responsible for the interpretation and application of applicable standards to actual design and installation situations.

### 9.1.2; REQUIRED INSTALLATIONS:

**9.1.2.1;** Fire alarm systems shall be installed whenever required by the Redmond Community Development Guide 20E.100.10, or other adopted code. Generally fire alarm systems shall be installed to monitor sprinkler systems; alert occupants of sprinklered buildings; provide protection for unsprinklered buildings, over 6000 square feet, or provide protection for unsprinklered buildings, excluding single-family residential, over 3000 square feet.

**9.1.2.2;** Building area (square footage) calculations used for determining fire alarm system requirements shall be computed based upon the (total) gross square footage on all floor levels as shown in Redmond Fire Department Standard **#13**, "Gross Square Footage".

### 9.1.3; PERMITS AND PLAN REVIEWS; GENERAL:

For installation or modifications, separate fire alarm system permits are required for *each* system, portion of a system, or building. Permit applications and plan submittals shall be in accordance with RFDS 9.2. Plan submittals shall reflect the minimum design standards as set forth in RFDS 9.3.

### 9.1.4; DEFINITIONS:

In addition to the definitions located within the documents noted in RFDS 9.1, the following definitions or clarifications shall be applicable to RFD Standards unless specifically noted.

**9.1.4.1;** Dead Panel - A condition of any fire alarm control panel where the panel has lost both its primary and secondary sources of power.

**9.1.4.2;** Designer of Record. - A competent individual acceptable to, and in good standing with, the Redmond Fire Department who designs or directly supervises the *design* of all fire alarm system submittals, resubmittals, and field changes, until complete installation, testing, and final Fire Department acceptance. See section 9.2.1 for requirements.

**9.1.4.3;** Device – All individual system components including, but not limited to, control units (panels), annunciators, power supplies, manual fire alarm boxes (pull stations), initiating devices (including detectors), notification appliance (audible or visible), transmitters/transponders, door closure holders, any fire safety or related equipment directly operated by a control unit, or similar.

**9.1.4.4;** E.F.C.C. - Eastside Fire Communications Center. The current (or any subsequent) dispatch center used by the Redmond Fire Department.

**9.1.4.5;** F.A.C.P. – The Fire Alarm Control Panel is the sole, primary fire control unit (panel) for the building.

**9.1.4.6;** Fire Marshal – The administrative head of Fire Prevention and the representative of the Chief of the Redmond Fire Department authorized to administer, interpret, and enforce the Redmond Fire Code, or their designees. Authorized designees of the Fire Marshal shall be members of the Fire Prevention Services Division and shall include Assistant Fire Marshals, and Fire Inspectors. On specific occasions or for specific tasks, other members of the Redmond Fire Department may be assigned duties as an authorized representative of the Chief or Fire Marshal.

**9.1.4.7;** Fire Watch – The provision of a competent person or persons responsible for the detection and reporting of a fire or other similar hazard in or on a complex, building, or property. This person must speak, read, write, and understand the English language. "Fire Watch" may be used synonymously with "Standby Personnel" (See Article 2501.18 of the 1997 U.F.C.). A "Fire Watch" shall maintain a record of their activity or rounds as directed by the Fire Marshal. See RFDS 14, "Fire Watch" for further information.

**9.1.4.8;** Fittings - refers to junction (“J”) boxes, splice boxes, pull boxes, or detector bases where electrical connections are made.

**9.1.4.9;** Monitor **–** Ability of an approved central station to receive an alarm, supervisory, or trouble signal in an approved manner from a fire alarm system at a protected site, or the ability of an approved control panel to receive a signal from a device.

**9.1.4.10;** N.F.P.A. - refers to the National Fire Protection Association.

**9.1.4.11;** National Fire Code - refers to published codes, standards, recommended practices, and guidelines prepared by technical committees organized under NFPA sponsorship.

**9.1.4.12;** Private Office - A room or area used for the purpose of conducting business or professional administrative services for 1 or 2 named occupants. Offices for use by an employee of a designated type (such as "lab technician only") are not considered private.

**9.1.4.13;** R.E.C. - The Redmond Electrical Code is the National Electrical Code as adopted by the City.

**9.1.4.14;** RFDS - refers to Redmond Fire Department Standards.

**9.1.4.15;** Runner Service (or emergency repair service) - A technician or other qualified person (other than the required number of operators), who shall be on duty at all times at the central station, a runner station, or in a vehicle in constant radio contact with the central station, available for prompt dispatching, when necessary, to a protected premises within the minimum time frames established in NFPA 72, 4-2.6.1 for the purpose of investigating signals, emergency maintenance, repair and/or restoration of the system (1 hour for an alarm signal, 1 hour for a supervisory signal, and 4 hours for a trouble signal).

**9.1.4.16;** Supervised – Having the ability to verify alarm device, wiring, and/or signal line integrity.

**9.1.4.17;** Townhouse-style unit – A multi-floor apartment or condominium that is a single living unit.

## 9.2; PLANS AND PERMITS:

A valid permit issued by the Redmond Fire Department shall be required for all installation or modification of any automatic fire alarm system including such systems monitoring automatic fire extinguishing or fire sprinkler systems.

- Maintenance or repair of existing components shall not require a permit unless over 20 devices. This shall include regularly scheduled and emergency work that is being done to maintain the system in operable condition or repair damage with the replacement of like equipment or devices so as to return the system to an operable condition. System upgrades or system expansions require a permit.
- A minimum of one permit is required for each building of a multi-building project. A permit is only valid for the work and by the contractor designated by the permit.
- Permits shall be good for 6 months from issuance. No permit may be extended after it has expired. An extension may be granted by the Fire Marshal based on the review of a written request, submitted prior to permit expiration, outlining just cause for the requested extension.

### 9.2.1; DESIGNER OF RECORD:

**9.2.1.1;** The designation "Designer of Record" shall refer to a competent individual acceptable to, and in good standing with, the Redmond Fire Department who designs or directly supervises the *design* of all alarm system submittals, resubmittals, and field changes, until complete installation, testing, and final Fire Department acceptance. This person shall be designated at the beginning of the job and follow it through to completion.

**9.2.1.2;** Any Designer of Record registered with Redmond who fails to follow the published process for review, installation, and inspection may jeopardize the designer's standing with the Redmond Fire Department. The remedy for suspension or revocation of the designer's number shall be documentation of subsequent qualification under B. below or other remedy as prescribed by the Fire Marshal.

**9.2.1.3;** Acceptable proof of competence shall be any one of the following:

**"A" --** A valid State of Washington Professional Electrical, or Fire Protection Engineer's license. Documentation of certification shall be provided to the Fire Marshal. Satisfactory documentation shall be accepted in writing by the Fire Marshal and by the assignment of a designer number.

**"B" --** A valid NICET Level II, III, or IV Certification for Fire Alarm Systems. Documentation of certification shall be provided to the Fire Marshal. Satisfactory documentation shall be accepted in writing by the Fire Marshal and by the assignment of a designer number.

**"C" --** Documentation of any combination of training, certifications, and design experience in resume' format shall be provided to the Fire Marshal. Satisfactory documentation shall be accepted in writing by the Fire Marshal and by the assignment of a designer number. The resume' must include specific training classes with dates of attendance, certifications with date of receipt and expiration (if applicable), a list of previous design experience including locations, dates, design responsibility, review jurisdiction. Such acceptance shall be valid for no longer than **two** years from the date of acceptance. This proof of competence shall not be renewed. Prior to the end of the two years the designer shall have qualified under "A" or "B", above.

**9.2.1.4;** If the "Designer of Record" does not submit work in Redmond for a consecutive period of three years they may jeopardize the designer's standing with the Redmond Fire Department. Their designer number shall be suspended pending review of their ongoing training and design work to verify they have maintained a working knowledge of the codes and RFD Standards.

## 9.2.2; PERMITS:

**9.2.2.1;** Valid permits from the City of Redmond shall be posted on site, and shall include either a valid Redmond Fire Department issued **Standard Fire Alarm System Permit** (see RFDS 9.2.3) or **"Quick Start" Fire Alarm System Permit** (see RFDS 9.2.4), and a valid Redmond low-voltage electrical permit.

**9.2.2.2;** A **Standard Fire Alarm System Permit** shall be used for all FACP, transmitter, STU, remote power supply, or new system installations; or the installation, replacement, or addition of 26 or more devices. A **"Quick Start" Fire Alarm System Permit** shall be used for the installation, replacement, or addition of 25 or fewer devices.

**9.2.2.3;** Permits are only valid for the work described therein, by the company identified on the permit, and for **6 months** from the date of issue.

**9.2.2.4;** New fire alarm systems shall **not** be installed nor shall modifications be made to existing systems until a complete application has been submitted, and a permit has been issued. The permit inspection card must be on site for reference by the Designer of Record, the installer or the fire inspector. When required plans have been submitted, reviewed, and approved, the Designer of Record shall check them for changes which may have been required as part of the approval. Shop drawings shall not be used for installation. An identical copy of the approved set may be used.

**9.2.2.5;** Installation or modification shall not be performed without valid permits on site, except for maintenance or emergency repair work. See section 9.2 #1.

**9.2.2.6;** Work begun under the electrical permit only, proceeds at the installers risk, and shall not include the placement of devices or equipment. The only low voltage fire alarm work allowed under an electrical permit only is the stringing of wire and the placement of mounting plates or back boxes.

**9.2.3; PLANS AND SPECIFICATIONS,** *STANDARD PERMIT SUBMITTAL***:**

**9.2.3.1;** Three (3) complete sets of plans along with specifications, calculations and a completed permit application form shall be submitted in person to the Redmond Permit Center, 15670 NE 85th St., (the first floor of Redmond City Hall). All applicable items identified in NFPA 72 A-1-5.5.2.1 and any information required by this section shall be submitted. The submittal shall also include one copy of manufacturers specification sheets on all equipment to be used. Items used shall be clearly marked to indicate the specific model of equipment used. Incomplete submittals may be subject to delay in recording, or review, or to rejection. A copy of the required permit application form is available upon request. For new systems or panel upgrades a copy of the owner's manual, including all items identified in NFPA 72 A-1-7.2.2 (a) shall also be submitted.

**9.2.3.2;** Plans shall be on standard 24" to 30" by 36" to 42" paper and shall be clearly legible regarding all pertinent information. If base plans are used that have additional but unnecessary information, then the additional information shall be deleted or shall not be copied at greater than half tone.

**9.2.3.3;** Plans shall include a labeled site plan of no smaller than 1":50' scale. If the work is a fire alarm system modification the area of work shall be indicated by cross hatching or shading. New systems shall indicate the location of the FACP and Sprinkler Riser Room where applicable. The information/signature block for the designer of record identified in RFDS 9.2.3 # 12 shall be provided on <u>every</u> sheet.

**9.2.3.4;** Plans shall include exterior elevations to indicate the location of exterior bell/strobe units and/or annunciators; interior cross sections showing typical areas, concealed spaces or unusual construction characteristics; a riser diagram; and details showing structural and/or mechanical elements which might affect spacing requirements (including any obstruction over 80" A.F.F.).

**9.2.3.5;** Plans shall include an accurate, dimensioned, floor plan to scale (1/8"=1') and shall clearly identify the use for <u>all</u> areas shown. At a minimum all areas of work and all adjacent areas shall be shown and labeled. Plans shall include a wiring diagram (per floor) overlaid on the floor plan. The wiring type, size, and number of conductors shall be noted clearly, and identified where changes occur. The location of all power supplies and shut offs shall be shown. Placement of all devices shall be shown. All fire sprinkler switches, and alarm or supervisory devices shall be shown.

**9.2.3.6;** Location of each and every system component shall be identified using an appropriate symbol as described with a key on each sheet of the plans that show such components. A recommended symbol key is available upon request. Non-standard symbols may cause delay in review or inspection.

**9.2.3.7;** All system components shall be identified on a component schedule identifying the amount of material, or number of devices to be installed, the temperature rating and power demands (if applicable), manufacturers name, and model number of each type of device, equipment, or material.

**9.2.3.8;** Provide a plan view schematic for each floor, showing all zones (including existing zones shown on an existing control panel, if applicable). All zones must be labeled with a unique and individual letter or number, and identified clearly as to their respective areas of coverage. The schematic shall indicate which zones are to be transmitted individually and which zones are to be grouped for transmission to the central station. See also RFDS 9.3.1 #7.

**9.2.3.9;** Battery calculations shall follow an approved format. An example is available upon request. A battery calculation shall include a listing of the current used by any and all energy consuming devices or equipment, each device powered by the batteries for both standby and alarm mode, and the current rating of the power supply. 30% shall be added under "standby" and "alarm" modes for battery depletion buffer. Voltage drop calculations shall be attached to the battery calculation form. This is required for both new and remodeled systems. Voltage drop calculations shall also identify (for the acceptance test) the acceptable minimum end of line voltage for the specific equipment used. See also RFDS 9.3.5.

**9.2.3.10;** The cover sheet of the plan submittal shall include the name, telephone number, and the Washington State license number of the design and installation company; the job address; the job site phone number; the name of the tenant; the name and phone number of the building owner; the name, address, and phone number of the approved monitoring company; and the name, address, and phone number of the general contractor for the project.

**9.2.3.11;** The Designer of Record shall be responsible for the compatibility of all system equipment including the FACP and transmitter, regardless of who is supplying or installing the equipment. FACP and transmitter design shall be submitted together. Installation, monitoring, maintenance, and runner service shall be established by contract prior to design submittals. See RFDS 9.4 #11, and RFDS 9.2.3 #15.

**9.2.3.12;** A competent **Designer of Record** acceptable to the Redmond Fire Department shall *design* or directly supervise the *design* of all Fire Alarm System submittals, field changes, and resubmittals **[See NFPA 72, Section 1-5.1.3, "System Design"]**. Proof of review and acceptance by the Designer of Record (see RFDS 9.1.4, definitions) shall be provided on all plan sheets as follows: An example will be provided upon request.

**All plan sheets shall be provided with an Information/Signature Block that contains all the following:**

a) The heading "Designer of Record" [in 20-22 pt. bold, and easily readable font].
b) The name and title of the Designer [in 14 – 16 pt., easily readable font].
c) The name of the company for whom the Designer works (if applicable) [in 14 – 16 pt., easily readable font].
d) The Designer's mailing address, contact telephone number, and fax number. [in 16 pt., easily readable font].
e) The Designer Number as assigned by the Redmond Fire Marshal [in 14 – 16 pt., easily readable font].
f) The stamp of a licensed Electrical or Fire Protection Engineer, when applicable. This may be within, or adjacent to, the information/signature block.
g) An original signature (within the block or stamp), on each plan sheet submitted.
h) A 3" x 4" space labeled for "Fire Department Use Only". This will be used for the RFD approval stamp, date, and signature.

**9.2.3.13;** Note on the face of the plans the ambient temperature range for the various spaces identified in the plans.

**9.2.3.14;** Note on the face of the plans the ambient noise range for all the various spaces identified in the plans and the justification (i.e., national standard or previous test) for this ambient level. Also indicate the minimum audibility level (dBA) to be used for the acceptance test.

**9.2.3.15;** Note on the face of the plans the contractually responsible parties for the following (see RFDS 9.4 #11):
a) Monitoring, retransmission of signals, associated record keeping, & reporting of signals.
b) Installation;
c) Testing and Maintenance; and
d) Runner Service

**9.2.3.16;** Calculations shall be included with plans that document any deviations from listed spacing, such as reductions for ceiling height or airflow, corridor spacing, or similar; or when otherwise called for in NFPA 72.

**9.2.3.17;** One half of the projected permit fee (per the adopted fee schedule) shall be paid at the time of application. See also RFDS 9.8.

### 9.2.4; PLANS AND SPECIFICATIONS, "*QUICK START" PERMIT SUBMITTAL*:

**9.2.4.1;** "***Quick Start"*** permits are issued for smaller jobs, have simpler submittal and review requirements, and allow the applicants, on qualifying projects, to begin work ahead of the project review and approval.

**9.2.4.2;** An application for an "***Quick Start"*** permit shall be made if the project includes ***25 or fewer devices***, excluding any of the following: a new FACP, transmitter, STU, or remote power supply.

**9.2.4.3;** A permit application, and 100% of projected fees (per the adopted fee schedule) shall be submitted at the time of application for the "***Quick Start"*** permit. If the application is valid and complete as indicated in this section, the "***Quick Start"*** permit may be issued. See also RFDS 9.8.

**9.2.4.4;** For a qualifying "***Quick Start"*** permit applications, plans shall **not** be required to be submitted. The Designer of Record shall provide a project summary sheet with the submittal. This summary sheet shall include a description, the location, and the scope of the project, and include the Designer of record signature block and all information identified therein. The Designer of Record shall update the owner's permanent plans with each change initialed and dated. This summary shall specifically attest to the compatibility of all new and existing equipment and devices. Battery and voltage drop calculations shall be attached to the project summary sheet. The inspection may be scheduled after the summary sheet and calculations have been reviewed and approved.

## 9.3; SYSTEM DESIGN:

### 9.3.1; GENERAL SYSTEM AND DESIGN REQUIREMENTS:

**9.3.1.1;** All fire alarm systems and fire sprinkler systems located the City of Redmond (unless specifically excluded by a provision of these standards) shall be monitored by a U.L. listed central station approved by the Redmond Fire Department. Any company providing U.L. listed central station service and which meets the requirements and performance standards for central station monitoring as listed in RFD Standards, section: 9.4 shall be approved.

**9.3.1.2;** All equipment, devices, and wiring shall be listed by Underwriters Laboratories, Factory Mutual, or another nationally recognized testing agency and shall be used in accordance with their listings.

**9.3.1.3;** No person shall perform any type of modification to any device or equipment which would void or be contrary to its listing.

**9.3.1.4;** All system components shall be compatible and be placement supervised.

**9.3.1.5;** The system shall be designed and installed in accordance with the UFC, UBC, the Redmond Community Development Guide chapter 20E 100.10, the Redmond Electrical Code, and NFPA standards for placement except where specifically noted in this standard. (see RFDS 9.1)

**9.3.1.6;** All equipment shall be securely mounted to the structure. Back boxes and straps are required for installations on drop in tile and "t" bar ceilings or similar construction.

**9.3.1.7;** Systems shall be divided into separate zones delineated by firewalls, sprinkler system coverage areas, floors, attics, crawl spaces, and/or other significant changes in construction or occupancy. When approved in advance by the Fire Marshal, floor zones may be omitted in town house type residential units. In these cases a zone shall consist of all floors or levels within each individual dwelling unit and the attic; and each such unit comprises one zone.

**9.3.1.8;** Normally open, automatic closing fire doors shall have hold open devices actuated by the fire alarm control panel utilizing smoke detectors installed in approved locations on one or both sides of the door. The F.A.C.P. may also release the doors on a general or zone alarm. Smoke detectors shall be placed per NFPA standards. Where normally open, automatic closing fire doors separate two or more alarm zones, activation of either zone of automatic fire alarm and/or waterflow shall also release the hold open devices. Failure of primary, or failure of primary and secondary power to the FACP shall also cause release of hold open devices.

**9.3.1.9;** AC power requirements shall meet all standards of the R.E.C.. Circuits for fire alarm equipment shall be dedicated for fire alarm use only, and so labeled.

**9.3.1.10;** All equipment subject to physical damage shall be protected so as not to inhibit required operations.

**9.3.1.11;** All initiation and control circuits, and controls, shall be 100% fail safe (controlled functions will occur even with loss of primary and secondary power to the unit or system).

### 9.3.2; CONTROL PANEL REQUIREMENTS:

**9.3.2.1;** Fire alarm control panels (FACPs) or secondary control units shall be located in an approved location, no higher than 5' 6”above finish floor to the top of the viewing window or controls. In sprinkler protected buildings the FACP will most often be located in the sprinkler riser room. If the FACP is not currently in the riser room, system modifications may require it to be relocated to the riser room. Obtain written verification and submit with the plan.

**9.3.2.2;** Panels shall be located in an area that is permanently climate and temperature controlled in order to maintain the rated design limits of the panel.

**9.3.2.3;** If the FACP is located in a room that is not normally occupied, then a remote audible/visual trouble annunciator shall be located in a normally occupied room or area near a main entrance.

**9.3.2.4;** Panels shall have a labeled light, which will indicate that the system is receiving normal power. A failure of normal power shall cause the light to go out and an audible trouble signal to sound.

**9.3.2.5;** All wiring and components of the fire alarm system shall have electrical supervision with audible and visual trouble indication at the panel and where necessary at a remote location, also.

**9.3.2.6;** All alarm signals shall "lock in" at the control panel until the activated device or devices are returned to a normal condition, and the control panel is <u>manually</u> reset.

**9.3.2.7;** While an alarm signal is "locked in" or silenced, the alarm panel shall be capable of transmitting a subsequent alarm signal to the central station.

**9.3.2.8;** A pre-signal feature as found in NFPA 72.1-5.4.10 shall **not** be allowed.

**9.3.2.9;** In occupancies that require regular fire drills; such as but not limited to educational, daycare, institutional, nursing, or retirement occupancies; panels shall include an audible test feature. When activated the test switch shall energize all interior alarm indicating devices but shall **not** transmit an alarm to the central station. See also RFDS 9.5 #7.

**9.3.2.10;** Upon activation of any alarm-initiating device that is part of the alarm system, the alarm panel shall cause all audible, visible, or voice alarm signal devices within an approved area to operate continuously until the alarm condition is cleared and the panel is restored to normal. This operation may be interrupted by the approved manual operation of an alarm silence switch or by an approved voice evacuation message. If the area of alarm is to be less than the entire building, a sequence of operations plan/matrix, compatible with an approved master evacuation plan for the facility shall be included with the submittal. The area of notification shall be no less than the zone of activation and all adjacent zones. See also RFDS 9.3.1 #7.

**9.3.2.11;** Upon activation of any particular initiating device and subsequent devices, the panel shall indicate all zones that are in alarm. See also RFDS 9.3.1 #7.

**9.3.2.12;** Various zones of initiating devices shall be grouped by type (waterflow, afa, or supervisory) within the alarm panel except approved addressable systems.

**9.3.2.13;** All alarm zones shall have a red alarm indicator light to indicate an alarm mode and an amber or yellow light to indicate a trouble condition for that zone (except approved alpha numeric displays).

**9.3.2.14;** An alarm zone shall be used to indicate activation of any suppression system.

**9.3.2.15;** All supervisory zones shall have an amber or yellow light to indicate activation of that zone and an amber or yellow light to indicate a trouble condition for that zone (except approved alpha numeric displays).

**9.3.2.16;** Trouble, supervisory, and alarm signals shall be distinctive from each other. An alarm shall cause operation of all alarm indicating or signaling devices applicable to that zone activation.

**9.3.2.17;** Supervisory device activation shall not operate any alarm signaling devices unless specifically allowed by the Fire Marshal in coordination with an approved evacuation plan, such as may occur for some hazardous material spill notification devices. They shall activate a distinctive audible device at the panel and transmit an appropriate signal to the central station.

**9.3.2.18;** The Designer of Record shall give clear written instructions to the Central Station regarding proper actions for them to initiate for any supervisory device activation.

**9.3.2.19;** All required alarm systems used for monitoring required fire protection systems of any type shall have an approved FACP and an approved transmitter. A transmitter shall not be used alone.

**9.3.2.20;** Key pads shall not be used for control of a new FACP.

**9.3.2.21;** Use of existing key pads for fire alarm panel control shall be discontinued upon system modification. Existing key pads shall use a Redmond approved access code and have clear, easily visible, and readily accessible instructions for operation by Redmond Fire Department or alarm company authorized personnel. Owners or occupants shall not have access to the key pad access code for fire alarm control functions. When equipment approved for burglar and fire alarm purposes has been used, the owner or occupant may have the access code for the control of the burglar system only.

### 9.3.3; TRANSMITTERS:

**9.3.3.1;** Fire alarm transmitters shall be located in the same room as the FACP. It shall be climate and temperature controlled to maintain the rated design limits of the equipment.

**9.3.3.2;** Transmitters shall be multiplex and compatible with the FACP. They shall be capable of transmitting signals as defined in this standard (See RFDS 9.4 #5).

### 9.3.4; WIRING:

**9.3.4.1;** Class B fire alarm wiring is acceptable for fire alarm systems unless otherwise required by the Fire Marshal or other authority. Certain occupancies such as hospitals require class A wiring. See also RFDS 9.2.3 #7 & #9.

**9.3.4.2;** All junction ("j") boxes used for low voltage fire alarm wiring shall have red painted cover plates.

**9.3.4.3;** All alarm wiring below 7' shall be in conduit or otherwise protected in an approved manner.

**9.3.4.4;** Fittings shall be completely enclosed, marked as required, and comply with the Redmond Electrical Code (NEC as adopted). Devices not requiring such boxes shall be so listed and clearly identified.

### 9.3.5; BATTERY REQUIREMENTS:

A rechargeable battery backup is required on all fire alarm installations. Batteries shall have enough capacity to operate the alarm system in a standby mode for twenty-four (24) hours, and then be capable of energizing all signaling devices for at least five (5) minutes. Some special systems such as voice evacuation require a longer minimum time. An additional 30% shall be added as a battery depletion buffer. An example battery calculation form is available upon request. Approved battery/generator backup may be used in lieu of battery-only backup with the prior approval of the Fire Marshal. See NFPA 72 1-5.2.6. See also RFDS 9.2.3 #9.

### 9.3.6; ANNUNCIATORS:

**9.3.6.1;** Remote alarm, trouble, and supervisory annunciation is required unless all fire and supervisory zones report to the central station. It shall be located on the exterior at a main entry.

**9.3.6.2;** Fire alarm annunciators shall be located in an approved location, no higher than 5' 6” above finish floor to the top of the viewing panel or controls.

### 9.3.7; INDICATING DEVICES:

**9.3.7.1;** Audible devices shall be placed in all buildings with automatic fire alarm systems so that with all intervening doors closed, the alarm device will be heard throughout the room or area at no less than 60 dBA and at least 15 decibels above the ambient noise level whichever is greatest. The Designer of Record shall evaluate the anticipated ambient noise level based upon the intended uses and national standards, and identify the anticipated ambient level and performance test level on the face of the plans. See RFDS 9.2.3 #14 and NFPA 72 6-3.2.2.

**9.3.7.2;** Residential occupancy noise level shall be measured at approximately 36" A.F.F.. Other commercial occupancies shall be measured between 40” and 70” A.F.F.. To the extent possible, performance testing shall be accomplished with all carpeting, fixed partitions, and wall coverings in place. If this is not possible, the installer shall consult the Designer of Record and the minimum level shall adjusted as may be necessary. See RFDS 9.2.3 #14. Subsequent spot tests may be required by the fire inspector.

**9.3.7.3;** Where ambient noise levels regularly exceed 105 dBA approved visual indicating devices shall be used in conjunction with audible devices. In these cases particular attention should be given to the orientation of visual devices in relationship to the anticipated location of equipment or machinery operators. In no case shall sound pressure exceed a measured reading of 120 dBA anywhere within the occupied area.

**9.3.7.4;** There shall be a minimum 10" fire alarm bell/clear strobe light located on the exterior of all buildings with a required fire alarm system, or a sprinkler system monitored by a fire alarm system. The bell/strobe shall be located on the upper 25% of the building's exterior, facing the street or roadway off of which the building is addressed; or facing the roadway which serves as the main vehicle entrance from that street or roadway; or as directed by the Fire Marshal. A lower location shall be used when tall buildings are built close to a narrow right of way or to avoid obstructions. In these cases a sight line detail shall be included in the plan submittal Neither horns nor horn/strobes shall be used to satisfy this requirement.

**9.3.7.5;** For compliance with W.A.C. 51.40 regarding accessible buildings see Washington State Amendments 1007.2.12.9 and 1007.3.3.3.4 to the UFC.

**9.3.7.6;** For visual device placement see NFPA 72 Chapter 6. The maximum height of 96 inches may be exceeded if it is demonstrated that it will result in better observation of the alarm signal.

### 9.3.8; INITIATING DEVICES:

**9.3.8.1;** All detectors or other initiating devices shall be installed according to this section, the manufacturer's specifications and instructions, and NFPA 72 chapter 5.

**9.3.8.2;** Full alarm system coverage for a building shall consist of at least one heat detector, smoke detector or other approved device placed in all rooms, halls, storage areas, basements, attics, lofts, spaces above suspended ceilings, concealed spaces, enclosed storage lockers, closets, walk-in closets or storage containers, attached carports or canopies, booths, saunas, electrical rooms, machine or elevator equipment rooms, and any other rooms, areas, or spaces having an area of ten (10) square feet or more unless specifically noted in this section or unless specifically determined by the Fire Marshal as being not required.

**9.3.8.3;** At least one fixed temperature heat detector shall be located in attached, exterior, storage areas regardless of square footage.

**9.3.8.4;** At least one fixed temperature heat detector shall be located in a kitchen area regardless of square footage.

**9.3.8.5;** If exposure to weather or moisture is high, care should be taken to prevent moisture from entering any portion of the device including back boxes or mounting plates.

**9.3.8.6;** Smoke detectors shall not be used in kitchen areas, lunch rooms, waiting areas, lobbies, shops, or any other area where there is anticipated to be smoke or dusts.

**9.3.8.7;** For special hazards, processes, unusual designs, or construction restraints; rate compensation tubes, beam type detectors, flame detectors, line type detectors, air sampling systems, or similar may be used with the concurrence of the Fire Marshal.

**9.3.8.8;** Manual pull stations when required in Residential, Assembly, Educational, and Institutional occupancies shall be installed adjacent to all exits or as specifically required by the Fire Code or Fire Marshal. Installation heights shall be no higher than 48 inches A.F.F. (as designated for all approaches identified in the accessibility standards).

**9.3.8.9;** Pull stations that are subject to repeated false alarms shall be fitted with an approved, local-alarming, cover.

**9.3.8.10;** Exterior manual pull stations require an approved weatherproof enclosure unless specifically listed for such use without such an enclosure.

**9.3.8.11;** Devices and equipment shall be physically protected from construction dust, moisture, or debris until final inspection, or they shall be replaced, prior to final testing, with new devices or equipment.

**9.3.8.12;** For smoke detector spacing in high air movement areas with air changes up to 60 per hour. See NFPA 72 Table 5-3.6.6.3. For greater air movement use devices listed for the corresponding greater velocity.

**9.3.8.13;** Duct detectors for the control of air handling equipment shall be reported as a supervisory zone and not as an alarm zone.

## 9.4; MONITORING:

**9.4.1;** This section covers minimum standards for signaling systems used to provide approved central station monitoring within the jurisdiction of the City of Redmond. Protective signaling systems have been in use for many years, and their value in connection with the fire hazard is recognized as applying both to the protection of life and to the prevention of property damage. The general experience with all protective signaling systems is that dependability of service is directly proportional to the amount and effective character of maintenance, testing, and supervision, and that these functions are best performed when the owner or occupant of the protected premises contracts for service with a listed or approved central station.

**9.4.1.1;** All required fire alarm systems, sprinkler systems, or specialized fire protection or extinguishing systems within the jurisdiction of the City of Redmond shall be monitored by an approved central station meeting and maintaining all of the standards within this section in a manner as noted in RFDS 9.4 #11.

**9.4.2;** A system or service having materials, methods of operation, or forms different from those detailed in this section may be examined or tested by the Fire Marshal according to the intent of the standards and, if found equivalent or better, may be approved.

**9.4.3;** All required fire systems within the jurisdiction of the City of Redmond shall be monitored with approved **Central Station Service** per NFPA 72 and this section except R-3 single family residences less than 6000 square feet and other occupancy classes less than 3000 square feet. Neither Remote nor Proprietary systems shall be acceptable for meeting this requirement.

**9.4.4;** All approved central stations shall have a valid City of Redmond Business license.

**9.4.5;** All fire system monitoring shall utilize only approved means of transmission of signals. Alarm transmission shall be by an approved active multiplex transmitter able to transmit and receive status changes, manually or automatically, from an approved alarm panel to an approved central station by one of the following methods:

a) Direct wire,
b) Dedicated leased telephone lines,
c) "Scan Alert",
d) Two-way Radio Frequency multiplex system with digital dialer backup,
e) Digital Communicator signal transmission over a “Scan Alert” supervised line using a listed internal or external STU, or
f) By other means as approved by the Fire Marshal.

**9.4.6;** Digital dialers used alone are not approved for primary signal transmission. McCulloh or McCulloh loop are not approved.

**9.4.7;** All central stations serving protected sites in Redmond shall have a direct ring down line to the E.F.C.C. as the **primary** means of alarm transmission.

**9.4.8;** All central stations serving protected sites in Redmond shall have a local access telephone number for the purposes of communication to and from the Redmond Fire Department, and to and from the E.F.C.C.. This line shall constitute the **secondary** means of alarm transmission. A local access telephone number shall be characterized by any number that can be dialed from the Redmond Fire Department (or from the E.F.C.C.) without dialing "1" prior to the number nor any number which would be long distance or create a "toll" charge.

**9.4.9;** All alarm, supervisory, and trouble signals shall be transmitted and identified accurately at the central station as to what they indicate (type and location of the particular zone as shown at the FACP).

**9.4.9.1;** Exception: With the approval of the Fire Marshal and with approved remote, exterior annunciation (see RFDS 9.3.6) the following zones may be grouped, as indicated, for transmission:

a) Waterflow: all waterflow alarm zones at one building may be sent as one "waterflow alarm" signal.
b) AFA: all manual and automatic fire alarm zones at one building may be transmitted as one "fire alarm" signal.
c) Supervisory zones: all valve closure supervisory zones at one building may be grouped under one supervisory zone. All hi/low air devices may be grouped as another supervisory zone. All other supervisory zones (such as low tank level, etc.)or other specialized alarm zones (Kitchen Hood and Duct suppression systems, Halon systems, etc.) must be transmitted separately to the central station.
d) System trouble: all trouble signals at the site may be grouped.

**9.4.10;** All specialized systems such as hood and duct extinguishing systems, halon systems, etc. shall be monitored and transmitted as a separate alarm zone. These systems shall be designed to operate from their own dedicated control panel for operation of the system and shall output alarm and trouble signals to the FACP. In small facilities these may be operated from the FACP with the approval of the Fire Marshal. All equipment used shall be compatible.

**9.4.11;** Central stations shall provide alarm and supervisory services plus maintenance, inspection, testing, and runner service in conformance with these standards. These services shall be provided under a contract to a subscriber by one of the following:

a) A listed or approved central station that provides all of the services with its own facilities and personnel.
b) A listed or approved central station that provides as a minimum the monitoring, re transmission, associated record keeping, and reporting of signals with its own facilities and personnel, and that may subcontract all or any part of the installation, testing and maintenance, and runner service.
c) A listed or approved fire alarm service-local company that provides the installation and testing and maintenance with its own facilities and personnel and that subcontracts the monitoring, re transmission, and associated record keeping and reporting of signals to a listed or approved central station. The listed fire alarm service-local company shall provide the required runner service with its own personnel or the listed central station with its own personnel.

This shall be designated on the submittal. See RFDS 9.2.3 #15.

**9.4.12;** The prime contractor shall indicate that the fire alarm system that is providing service at a protected premise complies with all the requirements of this code by providing identification of a means of third party verification as specified in NFPA 4-2.2.3.1 or 4-2.2.3.2. (see also RFDS 9.5 #8)

**9.4.13;** Where NFPA requires reporting to the AHJ “when required” such reports are required, and shall be submitted within 5 working days to RFD. Such reports may be faxed to RFD-Prevention Division Records at (425) 556-2272 or mailed to RFD-Prevention Division Records at 8450 161 Ave NE, Redmond WA, 98052

## 9.5; SIGNS AND SECURITY:

**9.5.1;** Access to all fire alarm control panels shall be secured with a lock. Alarm company representatives or subcontractors (with the central station, the installation company, the maintenance company, or emergency repair service company), sprinkler contractors trained by the alarm company, or representatives of the Redmond Fire Department shall be the only persons authorized to open or operate an alarm panel.

**9.5.2;** Keys shall not be left unsecured. Keys for access to control panels, and alarm control rooms, as well as other Fire Department required keys shall be installed in an approved emergency key box. The key box shall be installed at a location approved by the Fire Marshal. On site keys for service personnel shall be secured in a safe location.

**9.5.3;** When control panels are located inside approved weatherproof enclosures, closets, or cabinets these enclosures shall be openable without the use of tools. Keys for locks on these doors shall be labeled and kept in the emergency key box.

**9.5.4;** All buildings having required fire protection systems shall install an approved emergency key box. The location of the key box installation shall be as directed and approved by the Fire Marshal. All entrance door keys, grand master keys, master keys, any special keys or access cards, and alarm panel keys shall be labeled and provided by the owner or occupants for installation into the key box. The only approved key box system for use within the jurisdiction or influence of the City of Redmond is "Knox". Specific information must be obtained directly from the Redmond Fire Department (425-556-2255). For the acceptable installation location contact the assigned Fire Inspector for the job (425-556-2232).

**9.5.5;** AC power circuits for fire alarm equipment shall be labeled as dedicated for fire alarm use only.

**9.5.6;** When a control panel is located in a room, the outside of the door shall have a sign with minimum 2" high letters with ¼" stroke which reads "Fire Alarm Room", "Fire Alarm Panel", Fire Alarm Control", or approved alternate. Signs shall be high-contrast, red and white. In some cases more than one door may be required to be marked in order to identify the panel location. Exterior signs shall be weather resistant. Where the alarm panel room is also the sprinkler riser room both designations shall be used.

**9.5.7;** Panels with an audible test feature shall have such features clearly labeled and secured.

**9.5.8;** It shall be conspicuously indicated by the central station that the signaling system providing service at a protected premises complies with all the requirements of NFPA 4-2.2.3 by providing a means of verification, as specified by one of the following methods:

**9.5.8.1;** The installation shall be certified.(U.L.)

**9.5.8.1.1;** Signaling systems providing service that complies with all requirements of NFPA 72 shall be certified by the organization that has listed the central station, and a document attesting to this certification shall be located on or near the signaling system control unit, and shall identify the central station by name and telephone number.

**9.5.8.1.2;** A central repository of issued certification documents, accessible to the authority having jurisdiction, shall be maintained by the organization that has listed the central station.

**9.5.8.2;** The installation shall be placarded.(FM)

**9.5.8.2.1;** Signaling systems providing service that complies with all requirements of NFPA 72 shall be conspicuously marked by the central station to indicate compliance. The marking shall be by one or more securely affixed placards.

**9.5.8.2.2;** The placard(s) shall be 20 square inches (130 sq. cm) or larger, shall be located on or near the signaling system control unit, and shall identify the central station by name and telephone number.

**9.5.8.3;** The installation shall be labeled.(other company providing equivalent third party verification services)

**9.5.8.3.1;** Signaling systems providing service that complies with all requirements of NFPA 72, and RFD Standards shall be conspicuously marked by the central station to indicate compliance. The marking shall be by one or more securely affixed labels.

**9.5.8.3.2;** The label shall be at least 15 square inches or larger, shall be located on or near the signaling system control unit or component, and shall identify the central station by name and telephone number.

## 9.6; ACCEPTANCE TESTING & CERTIFICATE OF COMPLETION:

### 9.6.1; ACCEPTANCE TESTING:

**9.6.1.1;** Prior to requesting a final system inspection and acceptance test the installer shall perform a satisfactory, 100% test of the system. The entire system shall be complete from devices to panel to central station unless a phasing plan has been approved by the Fire Marshal prior to the request for final inspection of the system. A Redmond Fire Department Certificate of Completion form shall be completed up to the final inspection and testing portion, and submitted (or faxed) to, and received by the Redmond Fire Department before a request for final inspection will be accepted. See RFDS 9.6.2.

**9.6.1.2;** Prior to requesting a final system inspection, the electrical supply system including alarm wiring methods and materials, must have been signed off by the City of Redmond electrical inspector and be on line.

**9.6.1.3;** A representative selection of detectors shall be made by the fire department inspector and tested by the installer in the presence of the inspector. The fire inspector may choose to test all detectors. The installer shall use a hot air dryer to test rate of rise detectors, and "canned smoke" for smoke detectors unless specifically prohibited by the manufacturer. If this occurs the installer shall provide approved testing equipment.

**9.6.1.4;** The alarm control panel, devices, and wiring shall be inspected for placement supervision of all components. At a minimum, a representative number shall be tested for placement supervision at the time of the final witnessed test. The fire inspector may choose to test all detectors

**9.6.1.5;** At the discretion of the fire inspector a decibel meter may be used to verify the required alarm signal noise level. A new or recently calibrated meter shall be used in this case.

**9.6.1.6;** Where modifications to existing systems in occupied businesses occur, approved testing/recording equipment may be used to record audible levels during pre-arranged non-business hours in lieu of spot tests during the final inspection.

**9.6.1.7;** After all devices selected by the inspector have been tested the installer shall obtain verbal (by phone) confirmation that the central station has received and recorded all signals, has all signals properly identified and has the correct address and contacts for the account.

**9.6.1.8;** After the successful conclusion of the acceptance test the remainder of the Certificate of Completion shall be filled out and forwarded to the Redmond Fire Department. See RFDS 9.6.2. This shall be accompanied by a hard copy print out of the test signals received by the central station. All zones shall be defined by a written description not merely differentiated by number or letter. This may be done by use of a description key or zone schedule.

### 9.6.2; CERTIFICATE OF COMPLETION:

**9.6.2.1;** The Certificate of Completion form shall be completed by the installer and signed by the installation company and the central station prior to recording a copy with the Redmond Fire Department. The owner, the installation company, and the central station shall keep copies of the completed certificates for their records.

**9.6.2.2;** The signed Certificate of Completion form and a hard copy print out verifying final inspection test results shall be submitted within 5 working days of passing the acceptance test to the office of Fire Prevention Services, Redmond Fire Department. The hard copy print out of test signals shall be identified clearly as to date, time, zone(s), address, account number, and type of alarm(s).

**9.6.2.3;** A Certificate of Completion form shall be completed and submitted to the Redmond Fire Department in conjunction with either a new installation or a system modification. A copy of this form is available upon request.

### 9.6.3; INSTRUCTIONS:

Unless otherwise approved or directed by the Fire Marshal, instructions shall be located on the inside face of the door to the alarm panel or on an adjacent wall. They shall be protected within a waterproof bag or envelope.

## R.F.D. STANDARD 9.7; MAINTENANCE AND CONFIDENCE TESTING:

All systems shall be maintained and regular confidence testing shall be performed in accordance with this section.

### 9.7.1; QUALIFICATIONS

Except for actions taken by fire department personnel in the performance of their duties all maintenance, inspection, modification, testing, and/or emergency servicing of fire alarm systems as well as installation shall be performed by companies and installers or technicians in compliance with the provisions of RFDS 9.1 & 9.3.1

### 9.7.2; WORKING RELATIONSHIP:

All maintenance, inspection, modification, testing, and/or emergency servicing of fire alarm systems as well as installation shall be in accordance with the contractual relationships described in N.F.P.A. 72 and RFDS 9.4 #11.

### 9.7.3; MAINTENANCE AND REPAIR:

**9.7.3.1;** All fire alarm systems shall be maintained in an operative condition at all times and shall immediately be repaired or have parts replaced where defective. Deficiencies which jeopardize the operation of the system, or defective components, shall be remedied immediately. Other system or device deficiencies shall be identified to the owner or owner representative (such as in a confidence test report) and remedied within 30 days.

**9.7.3.2;** All fire alarm systems shall be extended, altered, or augmented as necessary to maintain and continue protection and comply with standards. Whenever any building, which is protected by a fire alarm system, is altered, remodeled, or added on to the building alarm system shall be similarly altered, remodeled, and/or added on to. This may include replacement of existing equipment not within the area of the remodel when the new equipment is necessary for the system to meet current standards. When expansion is such that the building becomes equipped with an approved sprinkler system, the detection portion of the alarm system may be deleted if approved by the Fire Marshal. Where partial sprinkler systems are allowed, the entire alarm system must remain consistent throughout the entire building.

**9.7.3.3;** Regular inspections and testing of alarm systems shall conform to the following minimum schedule.

**9.7.3.3.1;** Twice per year or more frequently, for all transmitters, and FACPs.

**9.7.3.3.2;** Once per year or more frequently, for waterflow-actuated devices, automatic fire detectors, valve supervisory devices, manual fire alarm boxes, combination night guard and fire alarm boxes, tank water level devices, building and tank temperature supervisory devices, and other sprinkler system supervisory devices. Approximately one half of all the devices in each category shall be tested every 6 months. This may then be coordinated with the testing identified in 3(a) above.

**9.7.3.4;** Methods and procedures for inspection and tests of fire alarm system equipment and devices shall be in accordance with NFPA 72, chapter 7. See RFDS 9.4 #11.

### 9.7.4; NOTIFICATION:

**9.7.4.1;** The Fire Marshal shall be notified when any required fire alarm system is placed temporarily out of service and upon restoration of normal service. Contact shall be made via the on duty Battalion Chief by phone at (425) 556-2234 (voice mail may be used), or by fax at (425) 556-2227. Include the location, occupancy name, time the system is placed out of service, estimated time the system will be out of service, technicians name and company, and the name and phone number of the monitoring company.

**9.7.4.2;** Central Stations shall notify the Redmond Fire Department in writing *at least* 14 days prior to the termination of service from an expired contract. This may be by letter, or by fax to (425) 556-2272.

**9.7.4.3;** Central Stations shall notify the Redmond Fire Department in writing *at least* 21 days prior to the discontinuance of service. This may be by letter, or by fax to (425) 556-2272.

### 9.7.5; PROBLEMATIC SYSTEMS OR SYSTEMS OUT OF SERVICE:

**9.7.5.1;** In the event of temporary failure of the fire alarm system or an excessive number of accidental or non-fire alarm activations, the Fire Marshal is authorized to require the building owner or occupant to provide standby personnel as set forth in UFC 2501.18 until the system is restored. Refer to UFC 1007.1.4 . While the system is out of service for maintenance or repair the technicians who have placed the system out of service shall be responsible for the duties of a fire watch. See RFDS 9.7.5 #2, 3, & 4.

**9.7.5.2;** While any system in an **occupied** building is shut down, disabled, disarmed, or placed on standby, the sprinkler or fire alarm contractor, installer, runner, or technician, shall be responsible for performing the duties of a fire watch, including maintaining alertness to a fire generated in any space covered by the inoperative system, notification of all occupants as to the status of the system, and maintaining at all times direct access to a reliable means of communication to the fire dispatch center for reporting of a fire incident.

**9.7.5.3;** While any system in an **unoccupied** building, building under construction or building undergoing demolition is shut down, disabled, disarmed, or placed on standby, and there are **workers** in the structure the sprinkler or fire alarm contractor, installer, runner, or technician, shall be responsible for notification of the person with control of the building as to the status of the system. The person with responsibility for the building shall be responsible for notification of all subcontractors and workers under their oversight. In such circumstances this person shall also maintain, on site, at all times, direct access to a reliable means of communication to the fire dispatch center for reporting of a fire incident.

**9.7.5.4;** While any system in an **unoccupied** building, building under construction or building undergoing demolition is shut down, disabled, disarmed, or placed on standby, and there are **no workers** in the structure the sprinkler or fire alarm contractor, installer, runner, or technician, shall be responsible for notification of the owner of the building as to the status of the system. The building shall be provided with an approved security plan in keeping with the value of the building and contents. This may range from the temporary boarding up or fencing off of the structure to a full fire watch.

## 9.8; FEES:

Fees will be charged for administrative costs, plan review, consultations, special processing, handling, inspections, etc. based upon the proposed installation as disclosed on the permit application, per the adopted fee schedule, and this section.

**9.8.1;** Fees for **"Quick Start"** permits shall be due and payable at the time of permit application and issuance. The fee will be based upon the proposed number and type of devices. If the permit is returned before the submittal is processed, then 50% of the fee is refundable.

**9.8.2;** One half of the projected permit fees for **Standard Permits** shall be due and payable at the time of permit application. The fee will be based upon the proposed number and type of devices. If the permit is returned before the submittal is processed, then 50% of the fee paid at application is refundable. After processing is begun the balance is due and is payable prior to the issuance of the permit or within 60 days after the submittal has been made, whichever is sooner.

**9.8.3;** One submittal and one resubmittal will be processed under the initial permit, review, and inspection fees. The review will be performed during normal business hours in the established order. An hourly rate as noted in the adopted fee schedule shall be charged for additional review time for a second or subsequent resubmittal. Additional required devices identified during review may change the base fee amount. If adjustments are made they shall be reflected in a revised permit fee. Fee changes resulting from additional reviews or devices shall be added to the base permit fees and shall be payable prior to permit issuance.

**9.8.4;** The Designer of Record shall inform the Prevention Inspection Group at 425-556-2232, if there are discrepancies between the permit description of work and the work as actually installed (field changes). If more devices are installed than shown on the permit, then any additional fees shall be billed to the permit holder. Failure to clear such billings may result in delay or non-issuance of other permits by the same applicant.

**9.8.5;** One inspection and two reinspections are included in the initial permit fees up to the following cumulative hours. A **"Quick Start"** Permit shall entitle the permit holder to 2 hours of inspection or reinspection time during normal business hours. A **Standard Permit** for up to 200 devices shall entitle the permit holder to 4 hours of inspection or reinspection time during normal business hours. A **Standard Permit** for over 200 devices shall entitle the permit holder to 1 additional hour of inspection or reinspection time during normal business hours for every 200 devices over 200. Additional inspection or reinspection hours required to final the project shall be charged to the applicant per section E of the adopted fee schedule. Failure to clear such billings may result in delay or non-issuance of other permits by the same applicant.

**9.8.6;** Early morning, evening, weekend, or holiday inspections are a customer service option that is on an as available basis, and is chargeable to the requesting applicant at the adopted overtime rate with a two-hour minimum. The requesting party must make the request in writing and include job, permit, and billing information. Failure to clear such billings may result in delay or non-issuance of other permits by the same applicant.

## 9.9; IMPLEMENTATION:

These standards shall become effective April 3, 2000. Since there are some logistical hurdles to full compliance as of April 3, 2000, therefore, compliance with particular provisions of this standard, as identified in this section, may be granted a temporary exception as identified below.

**9.9.1;** Partial system modifications shall be required to modify their contracts to conform to RFDS 9.4 #11 (single contract) as soon as possible, but no later than May 1, 2001. The Designer of Record shall notify all parties to current contracts, of the requirement for changes to such contracts. The Designer of record shall indicate in the submittal any deviations from RFDS 9.4 #11 that currently exist, and the date current contracts expire and when these contracts will be modified.

**9.9.2;** Partial system modifications shall be required to modify their contracts to conform to RFDS 9.4 #12 and 9.5 #8 (3rd party verification) as soon as possible, but no later than May 1, 2001. The Designer of Record shall notify all parties to current contracts, of the requirement for changes to such contracts. The Designer of record shall indicate in the submittal any deviations from RFDS 9.4 #12 and 9.5 #8 that currently exist, and the date current contracts expire and when these contracts will be modified.

**9.9.3;** New systems and total system modifications shall comply with RFDS 9.4 #11, 12, and 9.5 #8 if submitted on or after June 1, 2000. If submitted after April 3, 2000 and before May 31, 2000 they shall come into compliance by October 2, 2000.

**9.9.4;** If extenuating circumstances prevent compliance within these timeframes a request for extension may be made to the Fire Marshal prior to the compliance date. Such request shall list the items for which the extension is being requested, the reason for the request, and a proposed timeline for compliance. Granting of the request shall be based upon identification of delays beyond the control of the owner and current alarm service providers.